

Thursday, March 20, 2003
POSTER SESSION II
7:00 p.m. Fitness Center

Achondrites to Zchondrites

Kollar D. Masarik J. Nishiizumi K. Reedy R. C.

Monte Carlo Simulation of Cosmogenic Nuclide Production in the Brenham Pallasite [#1670]

Depth-dependent production rates of cosmogenic nuclides were calculated for the Brenham pallasite. The preatmospheric radius of Brenham was 4–6 meters. The quality of some cross sections used for the calculations need to be improved.

Gillies D. C. Engel H. P. Carpenter P. K.

Three Dimensional Characterization of the Mundrabilla Meteorite [#1666]

Computed Tomography using a cobalt source has been used to examine the three dimensional structure of the Mundrabilla meteorite. The two-phase nature, namely metal with 25% sulfide is clearly shown, as is the presence of graphite-rich cones and small silicate inclusions.

Garrison D. Bogard D.

³⁹Ar-⁴⁰Ar Dating of Two Angrites and Two Brachinites [#1069]

We report the first ³⁹Ar-⁴⁰Ar age dating results for two brachinites and two angrites, two rare types of differentiated meteorites possessing low potassium concentrations.

Yanai K.

Possible Xenolith and Xenocrysts of Olivine in the Asuka-881371 Angrite Collected from Antarctica [#1205]

Angrite is the oldest aged rock in all meteorites. Asuka-881371 angrite include some xenolith-xenocrysts like olivine aggregate and/ or large olivine grains. They are differ from any olivine in host for their occurrences, texture and compositions.

Schwartz J. M. McCallum I. S.

Comparative Study of Equilibrated and Unequilibrated Eucrites: Subsidiary Thermal History of Haraiya and Pasamonte Eucrites [#1246]

Thermal histories of Haraiya and Pasamonte eucrites reveal a 3 order of magnitude difference in cooling rates and evidence for cryptic metasomatism as a mechanism for Fe-Mg pyroxene equilibration.

Mittlefehldt D. W. Killgore M.

Northwest Africa 1401: A Polymict Cumulate Eucrite with a Unique Ferroan Heteradcumulate Mafic Clast [#1251]

Petrologic study of Northwest Africa 1401 reveals that it is an unusual polymict cumulate eucrite that contains a unique ferroan clast. This clast appears to represent a heteradcumulate from an evolved magma. Film at 11:00.

Setoyanagi T. Ebihara M. Yamaguchi A.

Chemical Compositions of Three Antarctic Monomict Eucrites A87272, A881467, and A881747 [#1593]

We performed a geochemical study of three Antarctic monomict eucrites, which experienced different degrees of thermal metamorphism to infer the petrogenesis with the early evolution of eucritic crust.

Domanik K. J. Shearer C. K. Hagerty J. Kolar S. E. Drake M. J.

Trace Elements in High-Ca Pyroxene & Plagioclase in the Bilanga Diogenite: Implications for the Magmatic Evolution of Diogenites [#2042]

The trace element contents of high-Ca pyroxene and plagioclase were measured in trapped intercumulus melt and exotic clasts in the Bilanga Diogenite. Results indicate significant crystallization of orthopyroxene and plagioclase.

McLeish E. R. Treiman A. H.

Textures and Fragment Size Distributions in Diogenite (HED) Meteorites: Processes and Geological Settings [#1407]

Brecciated diogenite meteorites occur in two textural patterns: fragmental and granular. Sizes of fragments in the former follow a power-law distribution (i.e., are scale-invariant). Granular diogenites are compact rocks, with shear boundaries between their fragments.

Promprated P. Taylor L. A. Anand M. Rumble D. III Korochantseva E. V. Ivanova M. A. Lorentz C. A. Nazarov M. A.

Petrology and Oxygen Isotopic Compositions of Anomalous Achondrite NWA 011 [#1757]

This study confirms that Northwest Africa 011 has anomalous O-isotopic compositions and higher Fe/Mn ratios, compared to eucrites. It possibly represents a new type of achondritic basaltic meteorite, with no apparent genetic relationship with eucrites.

Patzer A. Hill D. H. Boynton W. V.

An Extended Classification Scheme for the Acapulcoites and Lodranites [#1352]

We present a comprehensive chemical study of 15 acapulcoites and lodranites and introduce an extended classification scheme that takes into account the chemical and petrographic diversity of the investigated clan members.